

Rebuild Boston Opens Doors and Windows To Energy Savings and Healthy Homes

Since when do open doors and open windows translate into energy savings? They did when the Episcopal Diocese of Boston invested in comprehensive energy renovations of their high-rise apartment development called Morville House. Saddled with high utility costs and an aging building with significant deferred capital investments, Morville House's building management company, Maloney Properties, turned to Rebuild Boston Energy Initiative (Rebuild Boston) for help. Rebuild Boston opened doors to a solution and found a window of opportunity to make it all happen.

The Problem

Turn the clock back to the late 1960's and early 1970's when millions of dollars of federal funds were invested in the construction of subsidized housing for elderly residents. The design of choice was a 13 story high-rise building with studio, one and two bedroom apartments. This design had two major benefits. First, it maximized the number of apartments an investor could construct within a limited amount of land. Second, installing electric heat and mechanical ventilation without cooling were common strategies at that time that reduced construction time and cost.

Over twenty years have passed, and many of these buildings face significant financial and infrastructure challenges. For Morville House this meant high energy and water costs, significant tenant discomfort, and a potential

smoke hazard in the ventilation system design. However, like many such subsidized developments, management could not pay for needed investments out of reserves, or borrow the funds because they lacked the revenue to pay off loans.

The Solution

The solution to Morville House's problems evolved through a cooperative effort involving the building's management, Rebuild Boston, Boston Edison and the Conservation Services Group (CSG). Rebuild Boston hired Citizens Conservation Corporation (CCC) to study the building's energy and water conservation opportunities. CCC developed three energy



The Morville House, which was built in the late 1960's, received new efficient windows and a central ventilation system through Boston Edison's Integrated Resource Management program.

efficiency options: a short-payback package of improvements and two more extensive capital improvement options with longer paybacks but greater net value.

PARTNERSHIP FACTS:

- **Total Building Area Retrofitted:**
square feet
- **Total Energy Usage Savings:**
413,873 kWh per year
- **Total Energy Savings:**
\$40,974 per year
- **Total Cost of Project:**
\$353,300
- **Benefits:**
Morville House tenants now have operable windows and better ventilation, while the management upgraded its capital stock and reduced its operating costs at the same time.

Morville House chose a long-term option and agreed to work with Boston Edison's Integrated Resource Management program. The program contractor, CSG, replaced the existing leaky, inefficient and often inoperable windows, with highly efficient upgraded units; upgraded the building's central ventilation system; sealed the air ducts leading into the stairwell; replaced apartment ventilation fans with quiet, programmable units; installed new apartment thermostats and sealed air leaks. These actions cured the major building energy inefficiencies. The existing windows needed replacement in any event, and Rebuild Boston partners and contractors provided financial resources to pay the incremental cost of energy efficient windows and, equally important, technical skills to install them properly. Similarly, the ventilation system required design changes for fire safety, but the addition of utility energy efficiency funds made it possible to also make the ventilation more efficient to operate, which would not have happened otherwise.



The Results

This cooperative, comprehensive approach to Morville House's problems produced a win-win solution. Tenants now have operable windows and better ventilation for a safer, more comfort-

able environment. Their satisfaction with the building has increased while their rent has not.

The management of the Morville House gained a financing solution that upgraded its capital stock and reduced its operating costs. Boston Edison and its ratepayers, using private sector energy service providers obtained megawatts (savings) cheaper than power supply. The community gained environmental improvements and better housing for senior citizens.

The message is clear, when opportunity knocks – open the window!

TO LEARN MORE ABOUT THE REBUILD BOSTON PARTNERSHIP, CONTACT:

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